

## Diagnostics – Parking Light Flash Table

Flashes	Description	
1	<ul style="list-style-type: none"> <li>Doors locked, starter kill armed.</li> <li>Run time has expired.</li> <li>TRUNK button pressed.</li> </ul>	<ul style="list-style-type: none"> <li>Start signal received by the module.</li> <li>Cold weather mode cancelled.</li> </ul>
2	<ul style="list-style-type: none"> <li>Remote start attempt cancelled by remote.</li> <li>Doors unlocked, starter kill disarmed.</li> <li>Exiting ignition valet.</li> <li>Exiting remote valet.</li> </ul>	<ul style="list-style-type: none"> <li>Power-up reset</li> </ul>
3	<ul style="list-style-type: none"> <li>Entering cold weather mode.</li> <li>Entering ignition valet.</li> </ul>	<ul style="list-style-type: none"> <li>Entering remote valet.</li> <li>Entering extended run time.</li> </ul>
3 slow flashes...	<ul style="list-style-type: none"> <li>...after a failed start attempt</li> </ul>	<ul style="list-style-type: none"> <li>The module did not detect a tach signal.</li> </ul>
4	<ul style="list-style-type: none"> <li>+12 V detected on the brake input wire either while cranking or during run time.</li> <li>Entering multi-speed tach programming.</li> </ul>	
5 Slow	<ul style="list-style-type: none"> <li>Start attempt failed because no tach signal has been programmed.</li> </ul>	
5 Fast	<ul style="list-style-type: none"> <li>Tach signal programmed.</li> </ul>	
6	<ul style="list-style-type: none"> <li>A remote start was attempted while a tach-before-crank signal was detected before cranking.</li> </ul>	
8	<ul style="list-style-type: none"> <li>Unit reset: occurs when the unit is reset to the factory defaults</li> </ul>	
10	<ul style="list-style-type: none"> <li>A ground (-) signal was detected on the hood pin input wire.</li> </ul>	
1 —pause— 1 —pause— 5 flashes	<ul style="list-style-type: none"> <li>Transmitter has been programmed.</li> <li>[During the transmitter programming procedure]</li> </ul>	
1 – pause – 2	<ul style="list-style-type: none"> <li>There was a remote start attempt while the vehicle was in valet mode.</li> <li>Failed start: vehicle's low battery voltage.</li> </ul>	
ON SOLID for 3 seconds....	<ul style="list-style-type: none"> <li>...followed by 1 flash</li> </ul>	<ul style="list-style-type: none"> <li>Exiting cold weather mode</li> </ul>
	<ul style="list-style-type: none"> <li>...followed by 3 flashes</li> </ul>	<ul style="list-style-type: none"> <li>Entering cold weather mode</li> </ul>
ON continuously	<ul style="list-style-type: none"> <li><b>Idle mode:</b> Idle mode is engaged</li> <li><b>Run time:</b> The vehicle has been remote started and is in run time.</li> </ul>	
ON continuously	<ul style="list-style-type: none"> <li>While the brake pedal is pressed.</li> </ul>	<ul style="list-style-type: none"> <li>Confirms that cold weather mode is engaged</li> </ul>
ON 2 seconds	<ul style="list-style-type: none"> <li>The hood has been opened and a ground (-) signal has been detected on the hood pin input wire.</li> </ul>	
ON 4 seconds	<ul style="list-style-type: none"> <li>Locking or unlocking a door (with Door pulses configured to 4 sec.)</li> </ul>	
ON 20 seconds	<ul style="list-style-type: none"> <li>The hood pin has been flashed and you are now in the programming centre.</li> </ul>	
Constant flashes for 25 sec.	<ul style="list-style-type: none"> <li>Panic Mode is triggered.</li> </ul>	

# AS-2370

## Quick Installation Guide

### Table of Contents

How to Flash the Hood Pin .....	1	Horn Honk Timing .....	6
Resetting the Module.....	1	Supplementary Information .....	6
Transmitter Programming Procedure.....	1	Fifth Relay Output.....	6
Entering Programming Options .....	1	Tach jumper settings .....	6
Programming Options .....	2	Testing.....	7
Tach Programming .....	6	Diagnostics – Parking Light Flash Table .....	8

### How to Flash the Hood Pin

THE INSTALLER ...	THE MODULE ...
<ul style="list-style-type: none"> <li>Press and hold the hood pin for 4 seconds.</li> <li>Release the hood pin.</li> </ul>	Parking Lights "ON"
<ul style="list-style-type: none"> <li>While the parking lights are on, press down the hood pin once more and release the hood pin immediately, before the parking lights turn off</li> </ul>	"ON" for 20 seconds
<ul style="list-style-type: none"> <li>You now have 20 seconds to select one of the sub-menus</li> </ul>	

### Resetting the Module

- Flash the hood pin (see above).
- Once having reached the programming mode, quickly press and release the break pedal until the parking lights flash 8 times.

### Transmitter Programming Procedure

**WARNING!** By resetting the module, all programmed values are erased — i.e.: tach, transmitter as well as programming options. The programming options are returned to their default values.

- Flash the hood pin (see p.1) — the parking lights will stay on for up to 20 seconds.
- Before the lights go out, turn the ignition key to the **IGNITION ON (RUN)** position and immediately to the **OFF** position.
- Press and hold the **LOCK** button and keep it down until the parking lights flash 5 times quickly.
- The transmitter has been stored in memory.
- To exit: close the hood.

To program a transmitter on the second vehicle for multi-car operation, you must press the **TRUNK** button (instead of **LOCK** or **UNLOCK**) in step 3 of the transmitter programming procedure:

### Entering Programming Options

- Flash the hood pin switch (see p.1) — the parking lights will stay on for up to 20 seconds.

#### Notice

The manufacturer will accept no responsibility for any electrical damage resulting from improper installation of the product, be that either damage to the vehicle itself or to the unit. This unit must be installed by a certified technician using all safety devices supplied. Please note that this guide has been written for properly trained Autostart technicians: a certain level of skills and knowledge is therefore assumed. Please review the installation guide carefully before beginning any work.

#### Warning

This Remote Car Starter is designed for vehicles with a **manual** Transmission only. Before installing the unit, test that the OEM Door Switch contacts of the vehicle work well, and that the Parking Brake system operates properly.

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To obtain a copy of the install guide, please visit the <http://www.autostart.ca> website and click on the « Download » tab.

2. Press and hold the brake pedal.  
– And press one of the following buttons on the transmitter:
    - **LOCK** to access mode 1;
    - **UNLOCK** to access mode 2;
    - **TRUNK** to access mode 3;
    - **START/STOP** to access mode 4.
 The parking lights will flash and the horn will honk once (if configured), 2, 3 times or 4 times to confirm entry into a mode.
  3. Release the brake pedal.
  4. To exit programming centre, simply close the hood.
- After selection the function, press one of the corresponding buttons to select the option.
- **LOCK** button to access option 1
  - **UNLOCK** button to access option 2
  - **TRUNK** button to access option 3
  - **START/STOP** button to access option 4

## Programming Options

<b>MODE 1</b> <small>* indicates default setting</small>	
<b>FUNCTION 1 – Ignition-controlled Door Locks</b>	
<b>OPTION 1*</b>	<b>Ignition Lock disabled</b>
OPTION 2	Ignition Lock enabled
OPTION 3	Ignition unlock only
OPTION 4	Ignition lock only
<b>FUNCTION 2 – Secure Lock</b>	
<b>OPTION 1*</b>	<b>Secure Lock disabled (1-sec. disarm pulse)</b>
OPTION 2	Standard secure Lock enabled
OPTION 3	Smart secure Lock enabled
<b>FUNCTION 3 – Starter Kill Passive / Active Arming</b>	
<b>OPTION 1*</b>	<b>Passive arming (60 sec.)</b>
OPTION 2	Active arming
OPTION 3	Passive arming (3 min.)
<b>FUNCTION 4 – Door lock pulse timing</b>	
<b>OPTION 1*</b>	<b>7/10-sec. lock/unlock pulses</b>
OPTION 2	4-sec. lock/unlock pulses
OPTION 3	7/10-sec. lock pulse and two ¼ -sec. unlock pulses
OPTION 4	1/10-sec. lock/unlock pulses
<b>FUNCTION 5 – LED flashing</b>	
<b>OPTION 1*</b>	<b>Enabled (without starter kill → will flash only when ignition is OFF)</b>
OPTION 2	Disabled
OPTION 3	Enabled (with starter kill → will flash when the starter kill engages. This option should be selected ONLY if the starter kill is installed.)
<b>MODE 2</b> <small>* indicates default setting</small>	
<b>FUNCTION 1 – Safe Start.</b>	
OPTION 1	Safe Start enabled
<b>OPTION 2*</b>	<b>Safe Start disabled</b>
OPTION 3	"Swap Start" – enhanced Safe Start Mode with extended safety: To start the Engine; press the <b>SHIFT</b> button and then the <b>LOCK</b> button. To trigger AUX 2: press the <b>START/STOP</b> button. Must have configured option 1 or option 2 in mode 3 function 3 (AUX 2).
<b>FUNCTION 2 – Engine Run Time</b>	
OPTION 1	Run Time = 3 minutes in GAS mode / 8 minutes DIESEL mode
<b>OPTION 2*</b>	<b>Run Time = 15 minutes in GAS mode / 20 minutes DIESEL mode</b>
OPTION 3	Run Time = 25 minutes in GAS mode / 30 minutes DIESEL mode
<b>FUNCTION 3 – Idle Mode / Turbo Mode</b>	
OPTION 1	Idle Mode DISABLED / Turbo Mode DISABLED
<b>OPTION 2*</b>	<b>Idle Mode ENABLED / Turbo Mode DISABLED</b>
<b>FUNCTION 4 – Engine type and Cold Weather Mode</b>	
OPTION 1	30-sec delay diesel mode with 20-minute run time in cold weather mode
<b>OPTION 2*</b>	<b>1-sec delay gas mode with 3-minute run time in cold weather mode</b>
OPTION 3	18-sec delay diesel mode with 8-minute run time in cold weather mode
OPTION 4	7-sec delay diesel mode with 8-minute run time in cold weather mode
<b>FUNCTION 5 – Ignition Valet</b>	
OPTION 1	Ignition Valet disabled
<b>OPTION 2*</b>	<b>Ignition Valet enabled</b>
<b>MODE 3</b> <small>* indicates default setting</small>	
<b>FUNCTION 1 – Home Valet™</b>	
OPTION 1	Home Valet enabled
<b>OPTION 2*</b>	<b>Home Valet disabled</b>
<b>FUNCTION 2 – AUX 2 Programming</b>	
OPTION 1	Constant output while pressing <b>SHIFT</b> followed by <b>LOCK</b> . In Safe Start Mode: activate AUX 2 by pressing the <b>START/STOP</b> button.

## Testing

Before putting back the vehicle together, it is recommended to check that the system operates properly. The following testing procedures should be used to verify proper installation and operation of the system. Before testing, make sure that all connections are soldered and that the unit is plugged in.

- ☐ **Make sure the system properly enters and exits ready mode:**  
Ready mode is a sequence of steps that must be followed in order to allow manual transmission vehicles to be remote started. To get in to ready mode:
 

1. Ensure that all the doors are closed and that the gear shift lever is in the **NEUTRAL** position.
  2. With the engine already running, apply the parking brake and release the brake pedal.
  - Make sure to release the brake pedal.**
  3. Within 20 sec. press **LOCK**, or **UNLOCK**.
  - The parking lights will flash 3 times quickly and remain lit.**
  4. Remove the key: the engine will go on running.
  5. Exit the vehicle and close the door.
  6. Press and hold either:
    - a. **LOCK** to lock the doors arm the alarm and shut down the engine or enter turbo mode ;
    - b. **UNLOCK** to unlock the doors and shut down the engine or enter turbo mode ;
    - c. **START/STOP** to shut down the engine without affecting the doors.
- ☐ **Remote-start the engine and listen for starter drag.** If the starter cranks for too long, carry out another tach programming procedure.
- ☐ **Hood switch shutdown.** With the vehicle running under the remote car starter, open the hood; the vehicle should shut down. If it does not shut down, check the hood pin-switch and its connector.
- ☐ **Brake shutdown circuit.** With the vehicle running under the remote car starter, press and release the brake pedal. The engine should shut down immediately. If the engine continues to run, check the brake switch connection.
- ☐ **Parking brake shutdown circuit.** With the vehicle running under the system, disengage the parking brake. The engine should shut down immediately. If the engine continues to run, check the parking brake switch connection.
- ☐ **Door pin shutdown circuit.** Make sure the system **exits ready mode** when each door is opened while the vehicle is running under a remote start. (Test each door.)
- ☐ **Door locks and trunk testing.** Make sure each of these options respond to the transmitter (if installed).
- ☐ **Starter kill option.** Sit inside the vehicle with all doors closed. Arm the vehicle, then try to start the engine with the key. They engine should not start. If the engine starts, rewire the starter kill to reach proper operation.
- ☐ **Valet mode.** Make sure the remote car starter is able to properly enter and exit valet mode. When setting the remote car starter into valet mode, pressing the lock button will lock the doors without activating the starter kill. (Refer to the user guide for further information on valet mode.)
- ☐ **Idle mode.** Make sure the vehicle properly enters and exits idle mode.
- ☐ **Most comebacks are the result of misunderstandings about how a product works or performs. Take the time to properly explain all functions and features to the customers before they leave the premises. Doing this will save time and money.**

## Tach Programming

1. **Flash the hood pin (see p.1)** — the parking lights will stay on for up to 20 seconds.
2. Before the lights go out, press and hold the brake pedal and press the **LOCK** and **UNLOCK** buttons simultaneously — the parking lights will flash 4 times. At that point, release the brake pedal.
3. Start up the engine and allow the vehicle to reach regular engine idle speed.
4. Once the engine is running idle, press the brake pedal and keep it down until you hear the parking lights output click 5 times.
5. Release the brake pedal — the tach programming is now complete.

## Horn Honk Timing

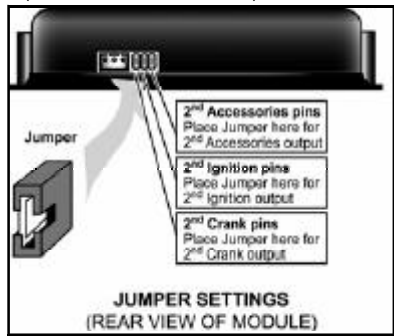
Follow these steps to program horn confirmation:

1. Ensure that the hood is up and that the ignition is off.
  - Hold the hood pin down for 4 seconds.
  - Release the hood pin. The parking lights will come on.
  - While the parking lights are on, immediately push and release the hood pin again. — The parking lights will stay on for up to 20 seconds.
2. Press and hold the brake pedal, then simultaneously press the **UNLOCK** and **START/STOP** buttons — the horn will chirp 5 times.
3. Release the brake pedal.
4. To change the timing:
  - a. To increase the Horn pulse by 3 ms, press the **LOCK** button.
  - b. To decrease the pulse by 3 ms, press the **UNLOCK** button.
  - c. To increase the pulse by 10 ms, press the **START/ STOP** button.
  - d. To decrease the pulse by 10 ms, press the **TRUNK** button.
5. To save the new settings: press **LOCK** and **UNLOCK**. If 3 chirps are returned the new settings have been saved.

## Supplementary Information

### Fifth Relay Output

(2nd IGN, ACC or CRANK)



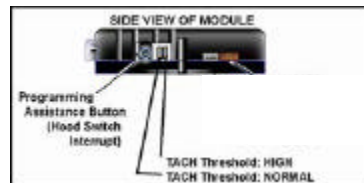
Remote car starters of this series are equipped with an on-board high-current programmable 5<sup>th</sup> relay that can be used to power a second ignition, accessory or crank wire. The unit uses 3 sets of pins; each set corresponds to a specific function of the output. In order to activate one of the three possible functions, you must place the jumper (supplied) on one of the three sets of pins and connect the 14 AWG wire to the second **IGN. / ACC. / CRANK** wire of the vehicle.

### Caution!

Only one set of pins can be used at one time. Using more than one jumper may result in serious damage to the vehicle. The relay output rating on this unit is 25 a at most. Defective oem solenoid switches can sometimes draw up to 50 or 60 a, causing the 30 a fuse to blow. Always verify your circuit with an appropriate measuring device.

### Tach jumper settings

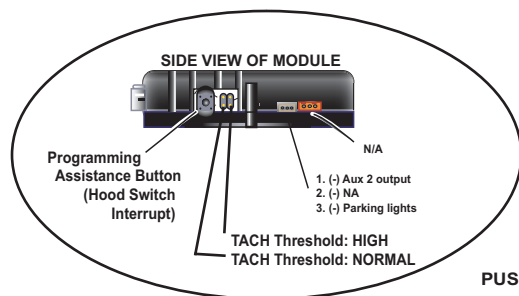
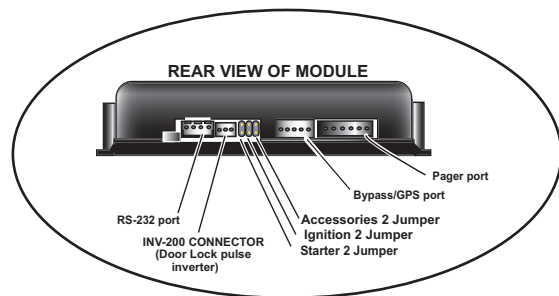
Some new vehicles have a higher TACH voltage threshold, which would fall out of the normal TACH trigger circuit of the remote car starter. Changing the jumper to TACH Threshold HIGH will allow the module to properly detect the TACH signal.



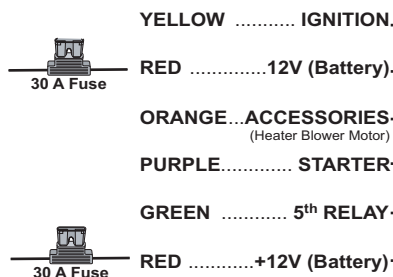
<b>OPTION 2*</b>	<b>Toggle ON/OFF (with 30-second timeout)</b>
<b>OPTION 3</b>	Horn confirmation when pressing the <b>LOCK</b> button
<b>OPTION 4</b>	Priority Door Access
<b>FUNCTION 3 – AUX 3 / Zone 3 Programming</b>	
<b>OPTION 1</b>	1-sec. output when Trunk button is pressed for 3 sec. with Ignition OFF or under remote run
<b>OPTION 2*</b>	<b>Constant output while the TRUNK button is pressed</b>
<b>OPTION 3</b>	Disarm and rearm pulses with trunk
<b>FUNCTION 4 – External Trigger</b>	
<b>OPTION 1</b>	Zone 3 disarm/rearm (Trunk Pin: a disarm pulse is sent before the Trunk opens, the vehicle rearms 4 seconds after the Trunk is closed).
<b>OPTION 2*</b>	<b>Engine Start/Stop</b>
<b>OPTION 3</b>	Key Sense
<b>OPTION 4</b>	Pager

<b>MODE 4</b>	<i>* indicates default setting</i>
<b>FUNCTION 1 – Multi-Level Features</b>	
<b>OPTION 1</b>	Multi-car Features, Basic Features, Customized Features
<b>OPTION 2*</b>	<b>Basic Features, Multi-car Features, Customized Features</b>
<b>OPTION 3</b>	Customized Features, Multi-car Features, Basic Features
<b>OPTION 4</b>	Basic Features, Customized Features, Multi-car Features
<b>FUNCTION 2 – Remote option</b>	
<b>OPTION 1</b>	2 <sup>nd</sup> generation remote
<b>OPTION 2*</b>	<b>1<sup>st</sup> generation remote</b>

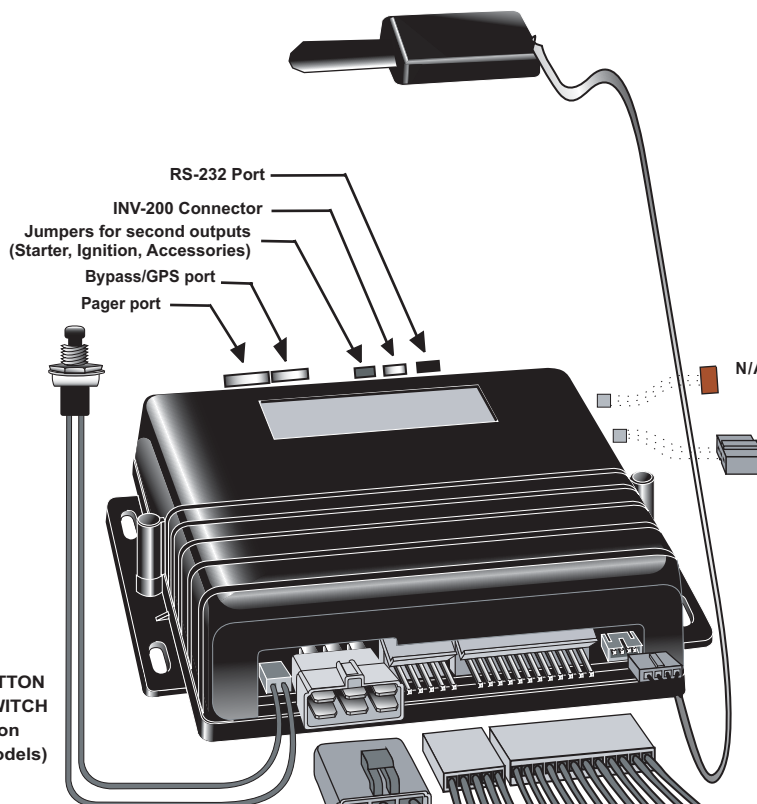
# WIRING SCHEMATIC



PUSH-BUTTON  
VALET SWITCH  
(Optional on  
certain models)



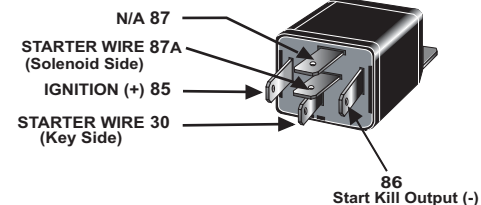
- 1- BLACK ..... GROUND (-)
  - 2- PURPLE ..... TACH (AC)
  - 3- GREY ..... HOOD SWITCH (-)
  - 4- ORANGE ..... BRAKE SWITCH (+)
  - 5- YELLOW ..... PARKING LIGHTS (+)
- 15 A Fuse



N/A

- 3. YELLOW ..... (-) PARKING LIGHTS
- 2. BLUE/WHITE ... (-) NA
- 1. GRAY/LIGHT BLUE ... (-) AUX 2 output

## Optional Starter Kill Relay



- 12- YELLOW ..... (+) Glow plug input
- 11- GREY ..... (-) NEG. Door input
- 10- WHITE ..... (-) GROUND when running
- 9- PURPLE ..... (-) EXT. TRIGGER input
- 8- ORANGE ..... (-) Parking Brakes input
- 7- WHITE/ORANGE ..... (-) Starter kill output
- 6- BLUE/WHITE ..... (+) POS. Door input
- 5- WHITE/GREEN ..... (-) DISARM
- 4- WHITE/BROWN ..... (-) REARM
- 3- GREEN ..... (-) UNLOCK
- 2- BROWN ..... (-) LOCK
- 1- BLUE ..... (-) TRUNK